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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/721,894	11/25/2003	Gon Kim	K-0562	6278

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EXAMINER	
PERRIN, JOSEPH L	

ART UNIT	PAPER NUMBER
1792	

MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/721,894	KIM ET AL.	
	Examiner	Art Unit	
	Joseph L. Perrin, Ph.D.	1746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 May 2007 & 21 August 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4 and 17-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4 and 17-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 23 May 2007 (and corrected claims of 21 August 2007) have been fully considered but they are not persuasive.

2. Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

3. Turning to the rejection(s) of the claims under 35 U.S.C. § 102, it is noted that the terminology in a pending application's claims is to be given its broadest reasonable interpretation (*In re Zletz*, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989)) and limitations from a pending application's specification will not be read into the claims *(Sjolund v. Musland,* 847 F.2d 1573, 1581-82, 6 USPQ2d 2020, 2027 (Fed. Cir. 1988)). Anticipation under 35 U.S.C. § 102 is established only when a single prior art reference discloses, either expressly or under the principles of inherency, each and every element of a claimed invention. See *Constant v. Advanced Micro-Devices. Inc.*, 848 F.2d 1560, 1570, 7 USPQ2d 1057, 1064 (Fed. Cir.), cert. denied, 488 U.S. 892 (1988); *RCA Corp. v. Applied Digital Data Sys., Inc.*, 730 F.2d 1440, 1444, 221 USPQ 385, 388 (Fed. Cir. 1984). Moreover, anticipation by a prior art reference does not require either the inventive concept of the claimed subject matter or the recognition of properties that are inherently possessed by the prior art reference. *Verdegaal Brothers*

Inc. v. Union Oil co. of California, 814 F.2d 628, 633, 2 USPQ2d 1051, 1054 (Fed. Cir. 1987), cert. denied, 484 U.S. 827 (1987). A prior art reference anticipates the subject matter of a claim when that reference discloses each and every element set forth in the claim *(In re Paulsen*, 30 F.3d 1475, 1478-79, 31 USPQ2d 1671, 1673 (Fed. Cir. 1994) and *In re Spada*, 911 F.2d 705, 708, 15 USPQ2d 1655, 1657 (Fed. Cir. 1990)); however, the law of anticipation does not require that the reference teach what Applicant is claiming, but only that the claims "read on" something disclosed in the reference. *Kalman v. Kimberly-Clark Corp.,* 713 F.2d 760, 772, 218 USPQ 781, 789 (Fed. Cir. 1983), cert. denied, 465 U.S. 1026 (1984) (and overruled in part on another issue), *SRI Intel v. Matsushita Elec. Corp. Of Am.*, 775 F.2d 1107, 1118, 227 USPQ 577, 583 (Fed. Cir. 1985). Also, a reference anticipates a claim if it discloses the claimed invention such that a skilled artisan could take its teachings in combination with his own knowledge of the particular art and be in possession of the invention. See *In re Graves,* 69 F.3d 1147, 1152, 36 USPQ2d 1697, 1701 (Fed. Cir. 1995), cert. denied, 116 S.Ct. 1362 (1996), quoting from *In re LeGrice,* 301 F.2d 929, 936, 133 USPQ 365, 372 (CCPA 1962).

4. Thus, regarding the §102 rejection over MOON, applicant argues that MOON does not disclose the claimed the heater being turned on when the sensor senses the heater is submerged and water supply continues to supply water to the washing machine after the heater is turned on. The Examiner disagrees and finds that there is no structural distinguishing language between applicant's intended use and the washing machine of MOON. It is fundamental that an apparatus claim defines the structure of

the invention and not how the structure is used in a process, or what materials the structure houses in carrying out the process. *Ex parte Masham*, 2 USPQ2d 1647, 1648 (BPAI 1987). See also *In re Yanush*, 477 F.2d 958, 959, 177 USPQ 705,706 (CCPA 1973); *In re Finsterwalder*, 436 F.2d 1028, 1032, 168 USPQ 530, 534 (CCPA 1971); *In re Casey*, 370 F.2d 576, 580, 152 USPQ 235,238 (CCPA 1967). As long as the apparatus of MOON is capable of sensing the heater being immersed, turning on the heater when immersed and supplying water, the prior art apparatus meet the requirements of the claimed feature. Applicant has not established on this record any structural distinction between apparatus within the scope of the rejected claims and the apparatus fairly described by MOON, and no such structural distinction is apparent. In MOON, the heater necessarily must be submerged when the heater is turned on since the low level sensing would automatically turn off the heater. Moreover, the heater is turned on to achieve a desired wash temperature and water may be added "after the heater is turned on" (see col. 4, lines 42 *et seq.*). Thus, the position is maintained that each and every structural limitation is taught by MOON and is fully capable of operating in the manner as claimed.

The Examiner notes that applicant's arguments do not clearly set forth how the broadened claims patentably distinguishes from MOON as required under 37 CFR 1.111(b) and no patentable difference is apparent.

5. Regarding the §102/103 rejection over BROKER, applicant argues that BROKER's heater and temperature sensor is only used when a stain cycle is selected. This is not persuasive because applicant's open claim language in the claims (i.e.

comprising) is within the scope of BROKER. The transitional term "comprising", which is synonymous with "including," "containing," or "characterized by," is inclusive or open-ended and does not exclude additional, unrecited elements or method steps. See, e.g., *Mars Inc. v. H.J. Heinz Co.*, 377 F.3d 1369, 1376, 71 USPQ2d 1837, 1843 (Fed. Cir. 2004) ("like the term comprising,' the terms containing' and mixture' are open-ended."); *Invitrogen Corp. v. Biocrest Mfg., L.P.*, 327 F.3d 1364, 1368, 66 USPQ2d 1631, 1634 (Fed. Cir. 2003) ("The transition comprising' in a method claim indicates that the claim is open-ended and allows for additional steps."); *Genentech, Inc. v. Chiron Corp.*, 112 F.3d 495, 501, 42 USPQ2d 1608, 1613 (Fed. Cir. 1997) ("Comprising" is a term of art used in claim language which means that the named elements are essential, but other elements may be added and still form a construct within the scope of the claim.); *Moleculon Research Corp. v. CBS, Inc.*, 793 F.2d 1261, 229 USPQ 805 (Fed. Cir. 1986); *In re Baxter*, 656 F.2d 679, 686, 210 USPQ 795, 803 (CCPA 1981); *Ex parte Davis*, 80 USPQ 448, 450 (Bd. App. 1948) ("comprising" leaves "the claim open for the inclusion of unspecified ingredients even in major amounts").

Further, as discussed above, applicant's intended use is not afforded patentable weight. Manifestly, operating the heater once the heater is submerged and filling with water are conventional steps in BROKER which occur in the manner claimed as discussed in the rejection. The Examiner notes that applicant's arguments do not clearly set forth how the broadened claims patentably distinguishes from BROKER as required under 37 CFR 1.111(b) and no patentable difference is apparent.

No arguments are presented with respect to how claims 2-4 provide any structural differences over the art. Accordingly, the rejection of claims 2-4 are maintained for reasons of record.

Regarding new claims 17-28, these will be discussed in any future rejections.

Claim Rejections - 35 USC § 102

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. Claims 1, 4 & 17-25 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,394,582 to MOON. Regarding claims 1, 4, 22 & 25, MOON discloses a drum-type washing machine having a water supply unit (28/28A) and heater unit (2/29) each configured to perform their intended function according to an inputted control signal from a control unit (20/23/24), and sensing means configured to detect a heating water level (below the heater, abnormal conditions) and a washing water level (normal washing conditions) based on sensed temperature (see Figures 1-2 and col. 2, lines 8-41). The temperature detecting means of MOON functions to detect an abnormal water level below the heater and a normal water level with the heater submerged which reads on sensing water level and temperature. MOON further discloses a water level sensing means (30). Thus, the temperature sensing means, either alone or in combination with the water level sensing means (30) are construed to read on the claimed sensor unit. Regarding the "wherein" clauses of new claims 17-21 & 23-24, these recitations are a statement of intended use which do not patentably

distinguish over MOON since MOON meets all the structural elements of the claim(s) and is capable of controlling the heater based on sensed conditions if so desired. See MPEP 2114. Accordingly, recitation of MOON reads on applicant's claimed invention.

8. Claims 1-2, 4 & 17-25 are rejected under 35 U.S.C. 102(e) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over U.S. Patent No. 6,553,594 to BROKER *et al.* ("BROKER"). Regarding claims 1, 2, 4, 22 & 25, BROKER discloses a drum type washing machine having a water supply unit configured to supply hot and/or cold water according to inputted control signal (col. 6, lines 11-30), a heater unit (170) configured to heat water to a predetermined temperature according to an inputted control signal, sensing means (172/190) configured to sense a low, minimum water level submerging the heater, which must exist before heater activation (readable on heating water level; col. 6, line 66 – col. 7, line 9) and configured to sense temperature "after the desired wash level is reached" (col. 6, lines 54-61), and controlling the water supply/level and heater via control unit (180) (see entire document, for instance, the abstract, Figure 1 and relative associated text). Regarding the "wherein" clauses of new claims 17-21 & 23-24, these recitations are a statement of intended use which do not patentably distinguish over BROKER since BROKER meets all the structural elements of the claim(s) and is capable of controlling the heater based on sensed conditions if so desired. See MPEP 2114. Accordingly, recitation of BROKER reads on applicant's claimed apparatus.

While the Examiner takes the position that the sensing means of BROKER reads on a "sensor unit", even if *arguendo*, one were to construe "sensor unit" as require a single sensor, it would have been obvious to one having ordinary skill in the art at the time the invention was made to substitute a functionally equivalent single sensor configured to sense water level and temperature for two sensors configured to sense water level and temperature, respectively, since it has been held that forming in one piece an article which has formerly been formed in two pieces and put together involves only routine skill in the art. *Howard v. Detroit Stove Works*, 150 U.S. 164 (1893). Evidence supporting a functional equivalent sensor configured to sense both water level and temperature can be found throughout the prior art, for instance, sensor (21) in U.S. Patent No. 4,703,633 to BOSCOLO *et al.* or sensor (130) in U.S. Patent No. 5,167,722 to PASTRYK *et al.*

Claim Rejections - 35 USC § 103

9. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

10. Claims 3 & 26-28 is rejected under 35 U.S.C. 103(a) as being unpatentable over BROKER. Recitation of BROKER is repeated here from above. While BROKER discloses two water levels including a heating water level and washing water level, BROKER does not expressly disclose the water level proportions relative to each other. However, since BROKER clearly discloses two different sensed water levels the position is taken that it would have been within the level and knowledge of one having

ordinary skill in the art at the time the invention was made to optimize the range volumes to arrive at applicant's claimed water level (volume) ranges since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233, 255 (CCPA 1955). See also *In re Waite*, 77 USPQ 586 (CCPA 1948); *In re Scherl*, 70 USPQ 204 (CCPA 1946); *In re Irmscher*, 66 USPQ 314 (CCPA 1945); *In re Norman*, 66 USPQ 308 (CCPA 1945); *In re Swenson*, 56 USPQ 372 (CCPA 1942); *In re Sola*, 25 USPQ 433 (CCPA 1935); *In re Dreyfus*, 24 USPQ 52 (CCPA 1934). Further, it is to be expected that a change in water level (volume) range percentage would be an unpatentable modification. Under some circumstances, however, changes such as these may impart patentability to a process or apparatus if the particular ranges claimed produce a new and unexpected result which is different in kind and not merely degree from the results of the prior art, such ranges are termed critical ranges and the applicant has the burden of proving such criticality. Regarding the "wherein" clauses of new claims 27 & 28, these recitations are a statement of intended use which do not patentably distinguish over BROKER since BROKER meets all the structural elements of the claim(s) and is capable of controlling the heater based on sensed conditions if so desired. See MPEP 2114.

Conclusion

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

12. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph L. Perrin, Ph.D. whose telephone number is (571)272-1305. The examiner can normally be reached on M-F 7:00-4:30, except alternate Fridays.

14. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael E. Barr can be reached on (571)272-1414. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

15. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Joseph L. Perrin, Ph.D.
Primary Examiner
Art Unit 1746

JLP